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On some new and little known MYRIAPODA from the Southern Alleghenies.

BY E. D. COPE.

PETASERPES, Cope.

Head concealed to the bases of the antennæ by the shield-like expansion of the scutum of the first annulus. Ocelli two, beneath the margin of the same, and at the approximated bases of the antennæ. Latter large, stout, hairy, six-jointed. Annulæ without lateral processes, each with two pores, forming two rows on each side of the body.

Petaserpes rosalbus, Cope.

The segments of the body are flattened below, and gently convex above. Their lateral expansion is a little greater than the length of the extended feet. Each has a delicate impressed line near the posterior margin, which passes round the extremity, producing the semblance of a longitudinal angle. The extremital margins are entirely continuous. The transverse diameter contracts very rapidly at both extremities, and the anal annulus and head, are relatively exceedingly small. The basilar segment is semidiscoid, and forms the segment of a hollow sphere. The anterior aspect is horizontal, and has a delicate marginal rim. The head is inferior, and has the short conic form of *Octoglena*, Wood. The mouth is situated near the extremity of a cone, and not of a rather flattened muzzle, as in the *Andrognathidæ*; there are hairs scattered about it and the sides of the head. The antennæ are of remarkable size for the head, and originate near together just at the inferior margin of the basilar segment. Just within and above them at their base is situated on each side a short crescentic ocellus or aggregate of ocelli, whose superior extremity is concealed by the margin of the basilar segment. In one specimen each of these presents a rugose surface, and in another seems to be divided into four ocelli, perhaps by the accumulation of a light colored deposit between the elevations. The antennæ possess six joints, of which the antepenultimate are a little the shortest. They become successively stouter towards the extremity of the antennæ, and are all quite hairy.

The reproductive organ of the male is a subglobular body on a short pedicel, hairy except the convex extremity, which is smooth. On the inner side two short pedicels support, each, a short curved spine, one curved backwards and another forwards.

The annuli are smooth. The anal annulus is small, and for the

greater part overroofed by the penultimate, which is broader than usual. The legs are minutely hairy.

The color of this animal in life is a delicate rose color, whitish at one extremity and shading into orange at the other.

The number of the annuli in the adults I find to be fifty-three down to fifty-one. In specimens a little smaller there are forty-six and four, and in the smallest and palest colored, hence younger, the number ranges from forty-three to thirty-nine.

The locality whence I obtained this species is on the western slope of the Cumberland mountains, in the northern part of East Tennessee. I found them under masses of chestnut bark in two places, in small families of some size, with *Polydesmus*. They have the motions of Polydesmi, i. e. they progress slowly and roll themselves up when captured.

This form is near Wood's *Octoglena*, of which one species, (*O. bivirgata*) was found in northern Georgia. It differs generically in the great extent of the basilar segment, which is very short and leaves the head exposed in *Octoglena*, and in the agglomeration of the ocelli, which, in the latter, are arranged in two long series of four each.

The annuli appear to be completely chitinized on the median line below.

Observations on other Myriapoda.

The *Brachycybe lecontei*, Wood, occurs in Jefferson County, in the Valley of East Tennessee. It is not very common and lives under bark of fallen logs. The structure of its head is much like that of *Andrognathus* externally, and the genus is probably to be referred to the Andrognathidæ rather than to the Siphonophoridæ. It differs from the former genus in marked characters, the confluence of the last three articulations of the antennæ being the most important.

The *Cambala annulata* Say, (Cope, Proceed. Amer. Philos. Soc. 1869, p. 181,) is one of the most abundant of the Myriapoda in the mountain regions of Tennessee and North Carolina. It is more abundant than the *Spirostrephon lactarius*, which it considerably resembles, and with which it is found under bark, etc.

As is known, the Myriapoda of the orders Strongylia and Sugentia, are sluggish in their motions and not furnished with offensive weapons. They therefore produce secretions of a very acrid character, which furnish a secure defense against many enemies. The species of *Spirobolus* and *Julus* discharge a yellowish juice having much the smell of aqua regia, and a very acrid taste. The *Spirostrephon lactarius* exudes

from a series of lateral pores* a fluid which has in its odor a close resemblance to creasote. The *Polydesmus virginensis* is defended by a fluid which has almost exactly the smell of hydrocyanic acid, and is fatal to small animals. *Petaserpes rosalbus* secretes a considerable quantity of a milky substance, which has the perfume of gum camphor.

Pseudotremia cavernarum, Cope, is found in some of the limestone caves of the valley of Tennessee. I found it especially abundant in the Lost Creek Cave on the Holston River, in Granger County, near and on piles of bat excrement under stones. In company with it were numerous small, leaping, lepismoid insects, a Pselaphid beetle, a Carabid somewhat like *Patrobis*, and a spider. Large numbers of a very small Ixodes-like animal covered parts of the surface and cavities of the body of a dead bat in a locality distant from the mouth of the cave.

The writer examined the Lost Creek Cave for a distance, stated to have been measured, nearly two miles from the mouth, and the statement is probably correct, judging by the time occupied in passing through, to the point reached. A creek of considerable size issues from the cave; near the mouth it is dammed, and a race leads the water for a short distance to a corn mill on the banks of the Holston river. The water is crossed by the path perhaps five times before it fills up the passage so as to prevent further progress. The passage is wide, dry, and with so few irregularities that a public road might be readily made in it to that point. I could not find any fishes; just outside the mouth a small Uranidea is not uncommon. The dam within the cave abounds in dead Ios, Uniones, etc., said to be carried there by floods of the Holston, but quite as probably the refuse of the meals of Indians. Bones of Indians, turkeys, and game animals are to be found at the mouth of the cave, which is in a bluff some fifty feet above the level of the River. At one side of the entrance a hard limestone deposit contains charcoal, Uniones and Melanizæ. The limestone cliff produced abundance of *Asplenium montanum*, *Pellæa atropurpurea*, and a delicate bipinnate *Pteris*.

* I must correct my character "no lateral pores" for *Spirostrephon*, (Proc. Amer. Phil. Soc. 1869, p. 179,) to "one series of pores."